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<b>Rev. No.</b>	<b>Rev. Date</b>	<b>Name</b>	<b>Description</b>	<b>TO Mod No.</b>
1	9/06/19	SO	Added Sections: 5.13 (Provide Quality Assurance Support for ACTUR Applications) 5.14 (Provide Quality Assurance for Accountable Car Organizations (ACO) Demonstration) 5.15 (Provide Weekend and After Hours Support) Updated Section 8.5 (Points of Contact) Updated Section 9.0 (Appendices)	2
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3	11/07/19	SO	Added dates to sub-section QA Specific Objectives (5.3.15) under Section 7.3 (Performance Standards and Acceptable Quality Levels).	4
4	4/30/20	SO	Updated Section 3.2 (Scope) Updated Section 5.3.15 (Test Data Management) Updated Section 7.3 (Performance Standards and Acceptable Quality Levels)	

**Performance Work Statement  
Defense Manpower Data Center (DMDC)  
Enterprise Information Technology Services II (EITS II) Contract  
Order ID: 47QFMA18K0030-0005/ID03180056001**

## **1.0 Introduction**

DMDC requires Quality Assurance (QA) testing for enterprise wide support for several applications within the DMDC portfolio. The major components of DMDC's IT environment, test environments, major programs, Commercial off the Shelf (COTS) and Government off the shelf (GOTS) software supported by this PWS are described in the attached Appendices.

## **2.0 Background**

DMDC operates major programs that include verifying military entitlements and benefits; managing the DoD ID card issuance program; providing identity management for the DoD; helping identify fraud and waste in DoD pay and benefit systems; personnel and property identification, authentication, and access control systems; personnel evacuation support systems; conducting personnel surveys; and assisting military members and their spouses with relocations, quality of life issues and post-service job searches.

With the higher adoption of continuous integration and the constraint of reduced budgets within the Department of Defense, DMDC's goal is to operate with automated and efficient processes to realize increased quality productivity with a decreased budget. With this task order, Quality Assurance shall adhere to the DevOps methodology. DevOps allows for continuous releases and deployments with continuous testing and monitoring which aims at building, testing and releasing software faster, smarter, and more secure. Successful Quality Assurance (QA) in the DevOps environment depends on automated application testing, collaboration with development team and business owners, and improving processes. This requires a cultural shift of the current enterprise QA environment to work on prevention versus detection.

During this task order, DMDC plans to implement a DevOps environment that allows for continuous integration. The Quality Assurance team will have access to all QA tools and will remain responsible for application automation tools (Redwood and Selenium).

Historical workload for 2017 to 2018 may be located in Appendix N and for a sample of descriptive overviews for applications currently supported by QA, refer to Appendix C (this list is not all-inclusive of the applications that may be supported by Enterprise QA).

## **3.0 Scope**

**3.1** The contractor shall provide the personnel and management necessary to provide test data management and Quality Assurance testing for DMDC's software components, to include: online and batch processing, web applications, web services, operator based and self-service portlets, system to system interfaces, database objects, shared library components, and integration to third party products and external organizations and other related software components. Applications provide releases to address requirements changes, security improvements, technology advances, bug fixes, etc. DMDC maintains approximately 200 applications.

**3.2** The Government requires a total of **approximately 580 releases; with approximately defined as no more than 584 releases** to contractor test or production environment during this period of performance of 12-months from date of award, during which that the Contractor shall support and provide Quality Assurance testing. A re-release to production due to leaked defects shall not be counted as an additional release. Leakages that are preventable by QA include: bugs that are testable in the pre-prod environment;

application does not work as intended per release notes. The Contractor shall notify the GSA Contracting Officer, the GSA COR, and the DMDC COR, in writing when the releases to production reach 75% of the period of performance baseline. The Contractor shall also notify the Government when it has reasons to believe that the annual amount of releases to production will surpass the baseline amount. Within this notice, the Contractor shall propose a cost estimate for successful support of the additional releases beyond 500. The Government anticipates that the implementation of DevOps will enable faster, more frequent releases. However, the Contractor should leverage the automated application testing included in the scope of this effort to release software faster and more efficiently.

#### **4.0 Objective**

The objective of this task order is to provide quality assurance testing that ensures requirements meet the needs of the customer and test data management while maximizing efficiencies through automation. The objective is for the development and maintenance processes are continuously improved to produce products that meet specifications.

#### **5.0 Requirements. The contractor shall:**

##### **5.1 Planning and Management of Quality Assurance**

5.1.1 Provide an updated Quality Management Plan (QMP) within 15 days of award that defines how Quality Assurance (QA), Quality Control (QC), and Risk Assessment will be conducted. When developing the QMP, the QA Contractor shall review and use as key input the following: all available planning artifacts including any guidance provided by DMDC in writing or orally; and International Organization for Standardization (ISO) 12207. The QA Contractor shall adhere to generally accepted industry practices, such as Agile, for project quality management and software development quality assurance management. At a minimum, the QMP shall include the following:

- Staff roles and responsibilities
- QA Workload Statistics
- Detailed plan for QA Review, including scope, criteria, and methodology to be employed
- Project Schedules
- Risk Assessment Methodology
- Quality checks

5.1.2 Provide a project plan that outlines the management approach, milestones, tasks and subtasks required to attain 50% automation (as outlined in 5.3; 5.3.15) for the application suites as represented by the applications in section 3.2 release count by the close of the task order. The project plan shall include the status; statistics; risk management review; critical path; and other milestone progress checks and updates to meet this requirement. Outline the strategy and parameters used to determine the order of applications automated with the objective of maximizing efficiencies and incorporate this strategy into the current QA Test Strategy outlined in 5.1.3. The project plan shall be completed within 15 days of task order award, and finalized with government approval within 30 days of task order award.

5.1.3 Maintain and update QA Test Strategy that outlines the contractor process used to: validate that all tested items perform as designed, fulfill requirements, meets any applicable service level agreements (as outlined per project) and does not adversely impact other applications. Outline the major activities, techniques, and tools that will be used.

5.1.3.1 Incorporate the Contractor strategy for automation implementation and the QA transition to DevOps as part of the QA Test Strategy. The QA automated testing shall exist, run, and operated within the DevSecOps infrastructure.

5.1.3.2 Incorporate the Quality Assurance Test Strategy consistent with existing DMDC QA standards, guidelines, and documented templates as outlined in the appendices.

5.1.3.3 Adhere to all DMDC Business Process Re-Engineering (BPR) workflows, requirements, and tool usage. Current BPR tools include Sparx Enterprise Architect, Microsoft Project Server, and Change Gear but could change throughout the life of this order. ServiceNow is in the implementation process and is expected to be in use at DMDC during this task order. Once implemented, ServiceNow shall be used to manage testing efforts.

5.1.3.4 Adhere to the configuration management process.

5.1.4 Measure the success during and after quality assurance testing. Success shall be measured through metrics which detail to the Government the: percentage of test case execution, test case pass rate, trend defect analysis, defects by severity, and defect leakage rate. Metrics shall be provided monthly with SMR documentation and made available on the QA SharePoint site post testing and upon request. Please refer to section 7.3 for a definition of the metric terms.

5.1.5 Analyze the defects that were leaked into production, or to user acceptance, and provide a summary report monthly with SMR documentation; at a minimum, include:

- Determination where the defect was leaked (e.g., CT or Production)
- Cause for leakage (e.g., test case was not created, requirement missed, requirement not defined, etc)
- Remediation (what the contractor will do to rectify the current leak, such as building appropriate test case, etc)
- Mitigation for future (what the contractor will do to assure this will not occur in the future)

5.1.6 Maintain all QA related artifacts on a Government provided SharePoint site.

5.1.7 Provide a Staffing Plan (SP) no later than (NLT) 10 calendar days after Task Order (TO) award. A copy of the comprehensive written SP shall be submitted to the GSA Contracting Officer, the GSA COR, and the DMDC COR within 5 working days when changes are made thereafter. Contractor's SP shall detail the contractor's approach to test support across DMDC's application portfolio. This approach shall include the contractor's methodology to:

- Continue to provide timely and high quality support when key contractor personnel are out of office or responding to other urgent QA requirements;
- Provide staffing redundancy to mitigate any deterioration to the timeliness or quality of performance in cases of staff turnover or surge in QA requirements
- Provide staffing redundancy to maintain automation framework development and sustainment
- Maintain a staff that can support automated testing

5.1.8 Maintain the standard for QA automated best practices for development teams to leverage during the software development lifecycle. The best practices shall outline automation dependencies, rationale for consistent naming standards by development teams, and other items required from development teams to support a robust automation testing framework.

5.1.9 Maintain the catalog that defines the level of QA efforts required for each type of projects conducted, based on type of application, number of elements within the scope of the project, deployment environments, shared components, interaction with COTS products, etc. The catalog shall be readily available on the DMDC SharePoint site and available upon request.

5.1.10 Participate in meetings within functional, technical, operational, and strategic areas to contribute to various agency level discussions including but not limited to analysis and design, enterprise QA initiatives, working groups and various ad hoc tiger teams. This includes participating in functional requirement meetings and/or recurring project meetings to incorporate new features/ enhancements to an application for the purpose of understanding the requirement and scope of the QA role and to better define the level of QA effort for a given task or project.

#### 5.1.11 Quality Control Plan (QCP)

The contractor's Quality Control Plan (QCP) shall be submitted no later than (NLT) 10 calendar days after task order award. A copy of the comprehensive written QCP shall be submitted to the Contracting Officer (CO) and Contracting Officer's Representative (COR) within 5 working days when changes are made thereafter. After acceptance of the quality control plan the contractor shall receive the Contracting Officer's acceptance in writing of any proposed change to his QC system.

#### 5.1.12 Risk Management Plan (RMP)

The Contractor shall assess, evaluate, document, and manage risks associated with the performance of this task order. The Contractor shall create, modify, maintain, and implement a task order-wide Risk Management Plan. The accepted Risk Management Plan shall be incorporated into the Order and submitted no later than (NLT) 10 calendar days after task order award.

### 5.2 Quality Assurance Testing

Provide support primarily within the DMDC identified QA regions for next generation development and production simulation, with the provision for QA support within other regions, including external hosted sites as required (the regions QA primarily works in are detailed in Appendix D). Requests for QA support outside of the QA regions will be reviewed by the applicable government leads for the QA and requesting division(s) for action as needed. Next generation development includes code being developed that shall replace what is in production. Production Simulation is code base currently in production.

The applications that are tested on the Enterprise Quality Assurance task order come from several different software development contracts within DMDC; it is imperative that communications remain open amongst other contractors. The tasks for completion within QA testing include:

5.2.1 Analyze and review requirements from the product team at the inception phase to assure clear and testable requirements and/ or user stories are provided. Provide feedback to the product team. QA shall be involved in code coverage analysis prior to Sprint closure, recommending that the appropriate levels of Junit test cases have been implemented.

5.2.2 Create and/or maintain a test plan for each project that requires Quality Assurance and review with project team(s) to ensure full coverage of test cases. The QA Test Plan is provides a detailed listing of all QA activities within each QA testing project; a sample template may be found in Appendix E. QA Test Plans shall be developed and maintained for all projects requiring QA level support. At a minimum, test plans shall outline:

- Sign off approval required
- Level of effort
- Resource estimate
- Schedule
- Planned tests cases
- Test cases traced to requirements
- Test method(s) necessary
- Entrance and exit criteria
- Assumptions
- Risks

The test case matrix and RTM locations should be identified in the test plan, for traceability purposes.

Provide the underlying information that is required within each QA test plan as outlined in the following sections:

5.2.3 Collaborate with project teams and develop test cases that are based on all requirements/ user stories. Test cases shall be created based on realistic scenarios that may occur in the production environment and shall cover 100% of outlined requirements.

5.2.4 Provide clear mapping between the user stories or requirements of tested software and the underlying test case(s) supporting complete coverage and validation of the provided functional requirements.

5.2.4.1 Update Requirements Traceability Matrix (RTM) for all projects that require quality assurance. Collaborate with the underlying project teams to review the functional requirements and/ or user stories in support of mapping these requirements to existing QA test cases, and identifying new QA test cases required to support the requirements. Assure the test cases provide accurate and realistic test case coverage for the functional area(s). Test cases shall provide coverage for all requirements. Update test cases as necessary and keep test cases current and meaningful throughout the life of the project. An overview of the RTM, including roles and responsibilities is outlined in Appendix G.

5.2.5 Defined method of testing (e.g., regression, exploratory, smoke, etc.), as agreed upon with the government point of contact. QA test plans shall accommodate regression testing of software components and functionality that has not been modified but may interact with modified components and functionality to ensure that changes have not adversely affected existing capabilities.

5.2.5.1 Collaborate with the underlying project teams to review the test plan and receive government approval.

5.2.6 Conduct testing and validate software is ready for the production and/or user acceptance environment by utilizing the appropriate test method agreed upon in the test plan.

5.2.7 Ensure, at a minimum, the following criteria shall be met before concluding testing (some or all of these functions may be automated):

- No open blocker or critical priority issues
- All items outlined in the scope according to the test plan behave as expected
- All issues resolved as “fixed” are verified
- Tests defined in test plan run and behave as well as or better than current production version of application
- 100% of test cases identified were executed and verified
- Full regression test completed (exceptions require approval by the Government technical point of contact and project lead)

5.2.7.1 Ensure all automated and manual QA Test Case Suites include the QA test transactions and corresponding results processed and ensure the reports are maintained and available for the government. The results of the executed test cases (pass/fail/reason for failure)

5.2.8 Follow and support the practices and configuration management processes per DMDC guidelines.

5.2.9 Log and track issues, defects, enhancements, etc., found during testing via the DMDC provided issue tracking and reporting system within 2 business days of discovery. Report and communicate Issues found to the relevant government and project leads within one day of discovery.

5.2.10 Develop and provide testing results to the Government Technical POC (TPOC), and project leads, after testing is complete (all or some of these activities may be automated). Upload to SharePoint within 2 business days of completion. This ensures QA is completed with testing and the application is ready for the stated environment (e.g., production or contractor test). At a minimum, results shall include:

- Reference to release (e.g., application and version number)
- Scope of current release (to clarify what the testing focused on)
- Type of testing conducted (e.g., regression, smoke, etc.)

- Total number of test cases, number and percent Assessment of failed or un-tested cases
- Remaining open issues and corresponding issue tracking number (e.g. JIRA tracking number); includes summary, priority and risk associated with open issues
- User impact of open issues
- Workaround if available with failed cases
- Recommendation of how to move forward (yes, goes to production or no, does not go to production)
- Reference to all testing artifacts (e.g., SharePoint site)

5.2.11 Log and track issues, defects, enhancements, etc., found during testing via the DMDC provided issue tracking and reporting system within 2 business days of discovery. Report and communicate issues found to the relevant government and project leads within one day of discovery.

5.2.12 Provide evaluation and testing support for the RAPIDS Platform Support (RPS).

### **5.3 Test Data Management**

5.3.1 Adhere to personally identifiable information (PII) regulations in accordance to DMDC guidelines and all requirements included in the base EITS II contract.. No operational, security-relevant, or personally identifiable information (PII) shall reside within any system or software during development test data maintenance, or QA testing.

5.3.1.1 Ensure all QA test or stub data supporting QA testing and validation is compliant with existing DMDC guidelines for personally identifiable information (PII).

5.3.1.2 Ensure that any PII level test data discovered within historical QA test data is de-identified per DMDC PII guidelines.

5.3.1.3 Assure test data is up-to-date, current and relevant for appropriate use in application. Use existing DMDC approved tools for test data creation and management.

5.3.2 Develop automated test scripts to perform setup of test preconditions, execute functional tests, report results of actual versus predicted outcomes, and other test control and test reporting functions.

5.3.3 Prepare and deliver Integrated Development Package (Design Documents, ETL Scripts, Software Source Code, Test Scripts).

5.3.4 Ensure standardized test cases are developed to be leveraged across other DMDC Enterprise projects. Examples of standardized test suites may include: authentication, log-in, log-out, application monitor health checks, etc.

5.3.4.1 Update and maintain QA testing suites supporting the development and execution of functional tests, the comparison of actual outcomes to predicted outcomes, the setting up of test preconditions, and other test control and test reporting functions when necessary.

5.3.5 Automate new test cases. Exceptions shall be documented and approved by the Government Program Manager and the exception sign off sheet shall be maintained in SharePoint. Exceptions shall follow the process outlined in Appendix M. Automation shall provide efficiencies on the testing cycle duration.

5.3.6 Test cases for new web-based applications shall be written using headless browser libraries. The web-ui automation shall be headless.

5.3.7 In instances where database connectivity is not required for the application, data required for test execution should be serialized to JSON or XML file in order to ensure reliability of environment and results.

5.3.8 Data that must reside in a database for test completion shall be stored and configured in the following ways:

- Stored in such a way that other applications cannot impact the integrity of the data prior to or during test execution,
- Configured so that multiple, asynchronous test automation sessions can be executed for a given application at any given time, and
- Configured using a script, rather than manually, so as to improve efficiency.
- Web-based testing validations shall utilize RESTful endpoints (versus UI activity flows).

5.3.9 Test case code reviews shall be performed periodically by automation engineer leads.

5.3.10 Full code review shall be performed for all new test cases developed.

5.3.11 Maintain automated test cases within Redwood HQ.

5.3.12 Ensure test results include automated alerts for test case failures or when test case execution takes longer than the predefined critical limit. The predefined critical limit shall be that all test case failures generate an alert (typically found in test result reports/logs). If it is determined by the project team responsible for delivering the solution to a DMDC customer, and that customer has determined that failure of a particular test should not prohibit release of the application or feature, then an exception may be applied

5.3.13 The target objective is for less than 5% of automated test cases to fail during automation execution. For each executed automated test suite, the target objective is for less than 5% of automated test cases to fail.

5.3.14 Provide detailed report and business/ technical justification of test cases that must remain manual. The exception process and criteria for manual test cases are outlined in appendix M.

5.3.14.1 Test cases deemed not automatable (as approved by the government outlined in Appendix M) shall be tracked as part of the total test cases maintained, but excluded from the automation percentage calculations.

5.3.15 **Forty percent (40%)** of all applications supported by Enterprise QA shall be 100% automated and executable in the DevOps process, per the guidelines of this task order, by the end of the period of performance.

5.3.16 Provide a monthly metric of Manual Test Cases to include: the total number of test cases, broken out by application, the number of manual test cases, the number of automated test cases, and the month the test cases were moved to the DMDC approved test data management tool.

5.3.17 Report a monthly metric of Automated Test Cases, to include: the number of test cases automated per month, the number and identified applications that has attained 100% automation, total manual and automated test cases per application, failed automated test cases and percent of failure, and the tool the test case is maintained in (e.g., Redwood vs. Mater). All test cases for applications that have been released in the past two years will be included in this metric calculation.

## **5.4 Test Tools and Automation Frameworks**

5.4.1 Maintain and support QA test tools and frameworks currently deployed in the DMDC environment; this includes upgrades as necessary. Testing tools may change during the life of this task order.

5.4.2 Ensure Redwood HQ provides quality and accurate automated testing; this includes providing updates and maintenance.



5.4.2.1 Maintain the process that identifies: automation failures, the reason for failure, and the required fix for the failure.

5.4.2.1.1 Correct failed automated test cases before next release to production.

5.4.2.2 Maintain the JIRA dashboard to track effort and provide high value metrics. At a minimum, the dashboard shall provide statistics on the following issues: time to resolve, number of open, in-progress, closed.

## **5.5 Personnel Security Assurance (PSA) Architecture Quality Assurance Support (OPTIONAL CLIN)**

In addition to requirements listed in sections 5.1 through 5.4 above, the contractor shall provide the following specific tasks to Conduct extensive QA testing on the DISS Family of Systems (FoS), which includes both Case Adjudication Tracking System (CATS) and Joint Verification System (JVS). The Government expects a consistent level of support as compared to the previous 12 months.

5.5.1 CATS is currently operational at FT Meade; however, DMDC is establishing a Disaster Recovery site within the DMDC infrastructure. CATS also has several upcoming releases approved by the stakeholders to include: a consolidated application, suitability expansion, and feature enhancements.

5.5.2 JVS is currently in development and will require a substantial amount of testing prior to achieving Initial Operating Capability (IOC).

5.5.3 The QA testing and resulting deliverables for both CATS and JVS shall meet the established standards for Acquisition Category III (ACAT III) programs.

5.5.3.1 Perform ETL activities as required for DISS.

5.5.4 Update and maintain the DISS test tool, user interface (UI), and test database.

5.5.4.1 Maintain documentation and maintenance procedures for the test data tools and processes.

5.5.5 Create and load test data to populate the test database based on input parameters.

5.5.5.1 Create and maintain training material for use of test data creation system and processes (DISS).

5.5.6 Maintain the plan for analyzing the test results for development releases.

5.5.6.1 Maintain a plan describing test data support required for agile development vendors.

5.5.7 Lead Government testing scenarios, capture results, and provide Test Analysis Reports outlining results, defects, severity and resolution.

5.5.7.1 Conduct Government Acceptance Testing (GAT) for each agile development cycle. Provide full regression testing as directed by the Government.

5.5.7.2 Conduct End User Evaluation (EUE) testing with various stakeholders to DISS releases as required by the Government.

5.5.8 Reconfigure test data application to support DISS development testing.

5.5.8.1 Update Test Data application to create test data to support interface testing and application testing.

5.5.8.2 Update Database creation scripts to populate data tables in DISS data model

5.5.9 Follow and support the practices and configuration management processes as outlined in the DISS Technical Guidance Document (TGD) and DISS Configuration Management Plan (CMP).

5.5.10 Test and verify tools and processes in accordance with the processes documented in the DISS TGD, to ensure that the test data tools provide outputs that mirror production data. The test data creation

tool outputs will also be integrated in the same manner as the production data. The contractor will use automation where appropriate to minimize human intervention when using the test data creation tools and processes.

5.5.11 Provide support for the test tools that were created to generate the test data. This effort will include problem resolution and maintenance. The contractor shall refer to the DISS TGD for support specifications.

5.5.12 Prepare and deliver Analysis and Design Document.

5.5.13 Create documentation and reference materials for development releases

5.5.13.1 Coordinate and provide materials for training development

5.5.13.2 Provide DISS screenshots with test data for training materials

5.5.13.3 Create test data based on input and workflow status for training scenarios as requested by the Government.

## **5.6 Migrate automated test cases from internal tools (e.g., “Mater”) to the DMDC approved test data management tool (OPTIONAL CLIN)**

**The current number of cases automated in legacy tools are approximately 26,000**

5.6.1 Migrate all web services automated test cases from non-approved internal tools to the DMDC approved test data management tool.

5.6.2 Migrate all batch application automated test cases from non-approved internal tools to the DMDC approved test data management tool.

## **5.7 Provide a Thick-Client Solution for Automation (OPTIONAL CLIN)**

5.7.1 Implement the Desktop Automation Tool (DAT), to include integration of the DAT, to include set up, configuration and training.

5.7.2 Configure and implement the thick client environment.

## **5.8 DMDC DISA Data Center Migration (OPTIONAL CLIN)**

It is anticipated that all applications supported at DMDC will migrate to the DISA Data center.

5.8.1 QA shall conduct smoke testing on applications that have migrated to the DISA Data Center to ensure applications run as well as or better than the current production version.

5.8.2 QA shall coordinate with project teams to ensure the appropriate smoke tests are executed to provide confidence the application runs as expected.

5.8.3 All applications that DMDC supports and moves to DISA shall be tested.

5.8.4 Maintain QA specific project plans required to support government initiated initiative.

## **5.9 508 Compliance (OPTIONAL CLIN)**

5.9.1 5.8.1 Execute 508 compliance audit, utilizing DMDC provided COTS product. Follow and maintain the 508 compliant standard operating procedures (SOP) in Appendix B. The purpose of the audit is to assure applications are compliant with 508 standards as set by the United States Access Board.

5.9.1.1 Document results in 508 dashboard, located on SharePoint, within 2 business days of completion.

5.9.1.2 The government anticipates no more than 15 audits shall be conducted.

### **5.10 Service Validation and Testing (OPTIONAL CLIN)**

There will be government support for this tasking to include a government process manager, owner and champion.

5.10.1 Consult with the business process realignment (BPR) team regarding QA business processes, SDLC, releases, and KPI to the government and/or other contractor support personnel for creating or updating of BPR documents.

### **5.11 Electronic Health Record Management (EHRM) Testing (OPTIONAL CLIN)**

5.11.1 Provide Quality Assurance Support for Electronic Health Record Modernization (EHRM) for a period of 12 months upon execution. Applications This Line Item shall follow the requirements listed in sections 5.1 through 5.4 above. Applicable tasks and deliverables shall be performed in accordance with DMDC Quality Assurance. Testing shall include the full range of independent test, validation, verification, and evaluation solutions to ensure the quality and reliability of the software, data, services, and systems delivered. These activities shall include tracking of potential defects and bugs, performing product reviews, ensuring that all fixes adequately resolve any identified defects, and documenting test results. For a list of applications supported see Appendix S. The government anticipates a consistent level of support as compared to the previous 12 months. NOTE – EHRM QA support is NOT included in the estimated release counts listed under PWS Section 3.2 above.

5.11.2 The Government anticipates a mix of Major, Minor, and Maintenance releases for up to six (6) of the twelve (12) applications listed in Appendix S for the first two quarterly releases; in the latter two quarterly releases there are anticipated to be a mix of Major, Minor, and Maintenance releases for up to nine (9) of the twelve (12) applications listed in Appendix S. In the first two quarters, it is not anticipated that there would be more than two (2) major releases across the applications; in the second two quarters it is not anticipated that there would be more than 3 major releases across the applications.

5.11.3 Provide an EHRM QA Test Strategy Plan that outlines the process that shall be used to validate that all tested products perform as designed, fulfill requirements, meets applicable service level agreements and does not adversely impact other applications. Plan shall confirm that the necessary communication and setup to perform functional testing are in place and assess whether the system interfaces with other applications or systems to mitigate operational risks to them during the testing phase. QA Test Strategy shall include at minimum the following:

- Process of testing
- Testing levels
- Types of Testing
- Testing approach & automation tool
- Risk Analysis
- Adding new defects, re-testing, defect triage
- Regression testing
- Test sign off
- A schedule describing the test cycle including tasks, activities, deliverables, and milestones, and the schedule's critical path reflecting delivery and response milestones;
- An organization chart reflecting the team members, roles and responsibilities

5.11.4 Develop test cases that align with the requirements and maintain a Requirements Traceability Matrix (RTM) for each test event.

5.11.5 Create automated test scripts that increase efficiency of processes; define pre-conditions, input data, actions to be taken, verification methods, and expected results.

5.11.6 Provide a Test Validation Report that demonstrates the tested item performed as designed, fulfilled requirements, met service level agreements and does not adversely impact other applications.

5.11.7 Maintain QA information on the Enterprise QA Dashboard and SharePoint site with all artifacts in the program document library, schedules, and dashboard.

5.11.8 Provide on-call support 24 hours a day, 7 days a week for after-hour release cycles and production downtime. Respond to all calls within fifteen minutes, in the event that the incident requires QA to test a behavior in production.

5.11.9 Provide an EHRM Quality Assurance Test Manager to create and maintain project schedule, prepare milestone reviews, oversee the execution of test plans, monitor the progress of testing, present briefing papers on testing strategy, monitor adherence to each stage of the testing lifecycle, mitigate QA risks including escalation to senior management, and collaborate with cross-functional teams to ensure test quality. Provide testing updates to the EHRM project management plan.

## **5.12 Physical Security and Law Enforcement Applications (PSLE) Testing (OPTIONAL CLIN)**

5.12.1 Provide Quality Assurance Support for PSLE applications. The Government expects a consistent level of support as compared to the previous 12 months. **NOTE – PSLE QA support is NOT included in the estimated release counts listed under PWS Section 3.2 above.**

## **5.13 Provide Quality Assurance Support for ACTUR Applications**

5.13.1 This CLIN shall follow the requirements listed in sections 5.1 through 5.4 above. The Government anticipates a mix of major, minor, and maintenance releases for up to 19 releases.

## **5.14 Provide Quality Assurance for Accountable Care Organizations (ACO) Demonstration**

5.14.1 This CLIN shall follow the requirements listed in sections 5.1 through 5.4 above. For the ACO Demonstration the contractor shall provide QA for one major release with multiple release items. The release shall focus on enrollment fees and the PCM business areas.

## **5.15 Provide Weekend and After Hours Support**

5.15.1 Weekend and after hours support is required periodically on an ad-hoc basis (e.g., testing prior to disaster recovery exercise, enterprise technology migration refresh, after-hours release cycles, production downtime) and will be coordinated as applicable in advance of the planned activity with the QA, IT Operations (ITOPS), and other government personnel. Weekend and after hours QA support requests are focused on mission critical implementations per government request. QA is expected to perform validation when the application(s) in question is working as expected. The government anticipates approximately 35 requests during the base period of performance. The validation support required is outlined in Appendix O.

## **5.16 Provide Quality Assurance for Defense Health Agency (DHA) Initiatives (Phase III)**

5.16.1 This CLIN shall follow the requirements listed in sections 5.1 through 5.4 above. The contractor shall provide QA testing on applications that require development efforts in support of DHA Initiatives (Phase III) for a period of 12 months upon execution.

5.16.2 The development efforts that require quality assurance include: accelerate fee and premium rate change (required in production by November 2019), catastrophic cap waiver reinstatement process (required in production by January 2020), catastrophic cap report (required in production by June 1, 2020), Medicare B reminder letter (required in production by March 2020), TRICARE Medicare Eligible Program Transition (per government approved project plan), Transition of TRICARE Overseas Program (per government approved project plan), Overseas Beneficiary Web Enrollment (BWE) modifications (required in production June 2020), and the collection of personal e-mail addresses and implementation of secure text messaging (estimated production date by August 2020). The details of these software

development tasks may be found in the Appendix R.

5.16.3 Provide a test strategy plan that outlines how testing and automation of those test cases shall be accomplished to ensure timely delivery of the DHA Initiatives (III) requirements.

### **5.17 Provide Quality Assurance for the Executive Performance Appraisal Tool (EPAT)**

5.17.1 This CLIN shall follow the requirements listed in sections 5.1 through 5.4 above. The contractor shall provide QA testing on the EPAT application for the base period of performance. EPAT requires maintenance releases every two weeks that consists of approximately 15 hours of development effort. The backlog of items that shall be considered for each release is included in Appendix Q.

5.17.2 EPAT is currently hosted in the Denver Data Center and shall be tested via a URL; access will be provisioned by the government project team as required.

5.17.3 Provide a test strategy plan that outlines the approach for providing timely quality assurance with a two week release cadence.

### **5.18 REPORTS AND MEETINGS**

#### **5.18.1 In-Progress Review (IPR)**

The Contractor shall follow the IPR requirements identified in the PWS Section 5.8.5 of the EITS II Base IDIQ

#### **5.18.2 QA Dashboard**

Contribute to maintenance of a QA Dashboard to provide visibility into QA functional activities including the metrics, QA testing workloads, automation coverage in applications progress, escape metrics, and enterprise QA initiatives. The contractor will collaborate with other DMDC functional groups as necessary including change, configuration, release management, and project leads to incorporate existing data as applicable to the QA Dashboard. This dashboard shall remain available to the government on SharePoint.

#### **5.18.3 Monthly Status Reports (MSR) and Senior Management Review (SMR)**

The Contractor shall follow the requirements identified in PWS Section 5.8.6 of the EITS II Base IDIQ

#### **5.18.4 Problem Notification Reports**

The Contractor shall follow the requirements identified in PWS Section 5.8.7 of the EITS II Base IDIQ

### **6.0 Deliverables**

All deliverables and work products shall be submitted to the COR in electronic format for acceptance and approval. The acceptance of deliverables and satisfactory work performance shall be based on the timeliness, accuracy and standards as specified in the requirements of the PWS.

<b>Deliverable</b>	<b>PWS Reference</b>	<b>Delivery Date</b>
Quality Management Plan Update	5.1.1	Within 15 days of award
Automation Project Plan Draft	5.1.2	Within 15 days of award
Automation Project Plan Final	5.1.2	Within 30 days of award
QA Test Strategy	5.1.3	Within 30 days of award
Monthly Metrics	5.1.4	Monthly with SMR
Defect Report	5.1.5	Monthly with SMR
Updated Staffing Plan	5.1.7	Within 10 days of award; updates within 5 days of change
IPR Minutes	5.1.10	Within 3 business days of meeting

Quality Control Plan	5.1.11	Within 10 days of award
Risk Management Plan	5.1.12	Within 10 days of award
Requirements Traceability Matrix	5.2.5.1	Updated throughout development lifecycle
Test Transaction Reports	5.2.8.1	Conclusion of testing; available upon request
Test Results	5.2.11	Within 2 business days of testing completion
Manual Test Case Report	5.3.16	Monthly with SMR
Automated Test Case Report	5.3.17	Monthly with SMR
Dashboard Report	5.18.3	Monthly with SMR
SMR Slides	5.18.3	15 <sup>th</sup> of each month
SMR Notes	5.18.3	Within 3 business days of SMR
Kickoff Notes	8.4	Within 3 business days of meeting
DHA Initiatives Phase 3 Test Strategy Plan	5.16.3	Within 15 days of exercised CLIN
EPAT Test Strategy	5.17.3	Within 15 days of exercised CLIN

## 7.0 Quality Surveillance

The Government may follow the Appendix P - Quality Assurance Surveillance Plan) to EITS II IDIQ Base Contract

### 7.1 Contract Discrepancy Report (CDR)

The Contractor shall follow the requirements identified in PWS Section 5.8.8 of the EITS II Base IDIQ

### 7.2 Problem Notification Reports (PNR)

The Contractor shall follow the requirements identified in PWS Section 5.8.7 of the EITS II Base IDIQ

### 7.3 Performance Standards and Acceptable Quality Levels

QA Specific Performance Objective	QA Specific Performance Threshold
Quality of Service: deliverables are complete and accurate	No more than one (1) set of corrections required for any product provided for a given deliverable. All corrections submitted within one (1) working day of the negotiated suspense.
Schedule: Deliverables are submitted on time.	No more than one (1) late deliverable per month. No deliverable late more than five (5) working days.
Business Relations: Proactive in identifying problems and recommending implementable solutions	Clear and consistent written or verbal responses and/or acknowledgement within one (1) working day of initial government notification.

QA Specific Objectives	<p>5.1.4</p> <p>Provide the percentage of test case execution per release. Unless otherwise agreed upon with the government COR, test case execution shall be 100% for all project releases. Provide on the signoff documentation to project teams.</p> <p>% of test case execution (indicates the progress of testing by giving the percentage of test cases executed with the result of a pass, fail, or blocked result) Percent of Test Case Execution = (Number of Passed Tests + Number of Failed Tests + Number of Blocked Tests) / Number of Test Cases</p>
	<p>5.1.4</p> <p>Provide defect leakage rate. Rate shall remain at 5% or less per release. Report progress in SMR.</p> <p>Defect Leakage (used to identify the efficiency of the QA testing) = (No. of Defects found in UAT and Production per release/ No. of Defects found in QA testing per release) * 100</p>
	<p>5.3.13</p> <p>The target objective is for less than 5% of automated test cases to fail during automation execution.</p>
	<p>5.3.5</p> <p>Applications automated at 100% shall be at least 50% more efficient than the baseline testing cycle. The percentage may be adjusted if there are test cases that cannot be automated, per the government guidance provided.</p>
	<p>5.3.15</p> <ul style="list-style-type: none"> <li>• Within 3 months, 15% of applications shall be 100% automated – 10/31/2019</li> <li>• Within 6 months, 25% of applications shall be 100% automated – 01/31/2020</li> <li>• Within 9 months, 35% of applications shall be 100% automated – 05/08/2020</li> <li>• By end of the task order, 40% of applications shall be 100% automated – 07/23/2020</li> </ul> <p>Baseline measurement: Assumes the number of applications is based on the release count identified in PWS Section 3.2 at time of award.</p>

QA Dashboard will be used a surveillance method for the above discussed metrics.

Positive Incentives: Past Performance Evaluation

Disincentives: The Government will request considerations of the metrics are not met.

## **8.0 Contract Administration**

This Task Order shall follow all of the requirements identified in the EITS II IDIQ.

**8.1 Contract Type:** This contract type of firm fixed price

**8.2 Period of Performance:** The period of performance for this Task Order shall be 12 months from date of award.

**8.3 Place of Performance/Hours of Operation:** At least 50% of the work under this task will be performed on site at DMDC facilities in Seaside, CA. The remaining percentage of work may be performed at a contractor provided facility. Any work performed at other locations must be identified in the formal submission and approved by the Government. Occasional travel may also be required, as noted in PWS Section 9.0- Travel.

The contractor is responsible for conducting business between the hours of 8 a.m. to 5 p.m depending on their physical location. Monday thru Friday except Federal holidays or when the Government facility is closed due to local or national emergencies, administrative closings, or similar Government directed facility closings. The Contractor must at all times maintain an adequate workforce for the uninterrupted performance of all tasks defined within this PWS when the Government facility is not closed for the above reasons. The work under this task may require off hours support during evening and weekend hours particularly for Tier 3 support and production implementations.

**8.4 Post Award Conference:** The Contractor shall follow the IPR requirements identified in the PWS Section 10.1 of the EITS II Base IDIQ.

## **8.5 Points of Contact:**

DMDC COR

Will be assigned Post Award

GSA Contracting Officer (CO)  
Mr. Mike Levy  
GSA-FAS, Mid-Atlantic Region  
The Dow Building - 3rd Floor  
100 S. Independence Mall West  
Philadelphia, PA 19106  
E-mail: [Mike.Levy@gsa.gov](mailto:Mike.Levy@gsa.gov)  
Tel: (b) (6)

GSA Contract Specialist (CS)  
Mr. Rajdeep Singh  
GSA-FAS, Mid-Atlantic Region  
The Dow Building - 3rd Floor  
100 S. Independence Mall West  
Philadelphia, PA 19106  
E-mail: [rajdeep.singh@gsa.gov](mailto:rajdeep.singh@gsa.gov)  
Tel: 215-446-2868



GSA Contracting Officer's Representative (COR)

Mr. Scott Ostrow

GSA-FAS, Mid-Atlantic Region

The Dow Building - 3rd Floor

100 S. Independence Mall West

Philadelphia, PA 19106

E-mail: [Scott.Ostrow@gsa.gov](mailto:Scott.Ostrow@gsa.gov)

Tel: 215-446-4497

**8.6 Government Furnished Property/Equipment/Information (GFP/GFE/GFI):** The Contractor shall follow the requirements identified in the PWS Section 10.8 of the EITS II Base IDIQ

**8.7 Travel:** Local or long-distance travel may be required to various locations CONUS. The annual travel estimate is \$5,000.00. The Contractor shall follow the travel requirements identified in Section 10.7 of the EITS II PWS.

**8.8 Security:** The contractor shall comply with all security requirements detailed in the PWS of the EITS II BASE IDIQ

**8.9 Inspection, Acceptance, and Payment:** The Contractor shall follow the IPR requirements identified in the PWS Sections 7.0-7.5 of the EITS II Base IDIQ

**8.10 Invoicing:** Requirements identified in the GSA Invoice Clause included in the EITS II Section B to E will be followed.

## **9.0 APPENDICES**

Appendix A – Product Roadmaps

Appendix A1- Roadmap PSLE

Appendix B – 508 Processes and Procedures Guidelines

Appendix C – Description of Sample DMDC Projects

Appendix D – Description of Environments

Appendix E – Test Plan Sample Template

Appendix F – QA Tester Handbook

Appendix G – Requirements Traceability Matrix Overview

Appendix H – Glossary for QA Task Order

Appendix I – QA Process Workflow

Appendix J – Template Checklist

Appendix K – Template QA Test Sign Off

Appendix L – QA Process Workflow Checklist

Appendix M – Automation Exception Process

Appendix N – Historical QA Workload 2017-2018

Appendix O – Weekend Validation

Appendix P – EPAT Roadmap

Appendix Q – EPAT Backlog

Appendix R – DHA Initiatives Development Tasks

Appendix S - EHRM Sustainment Applications